CLAIM AMENDMENTS

Please amend claim 3 as follows.

Please add new claims 4-5.

1. (Original) A method of producing nano-composite powder consisting essentially of hydroxyapatite (HA) and zirconium oxide (ZrO_2) comprising the steps of:

reacting orthophosphoric acid with calcium hydroxide to form a HA suspension;

adding zirconium suspension to the HA suspension to form a composite feedstock;

subjecting the composite feedstock to Radio Frequency (RF) Plasma Spraying to form the nano-composite powder.

2. (Original) The method according to claim 1, wherein the quantity of zirconium oxide suspension added is in the range of 10 to 40 weight %.

3. (Currently Amended) A nano-composite powder comprising:

60-90 wt % calcium hydroxyapatite;

10-40 wt % zirconium oxide; and

traces of calcium phosphate,

wherein the nano-composite powder comprises alloyed nano-sized particles, the alloyed nano-sized particles comprising calcium hydroxyapatite, calcium phosphate and zirconium oxide.

4. (New) The nano-composite powder of claim 3, wherein the alloyed nano-sized particles are of a size below 200 nm.

5. (New) A nano-composite powder comprising:

60-90 wt % calcium hydroxyapatite;

10-40 wt % zirconium oxide; and

traces of calcium phosphate,

wherein the nano-composite powder is obtained by the method of claim 1.